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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,969	11/29/2001	Shoichi Aoki	10830-081001 / A36-137212	4909
26211	7590	12/17/2003	EXAMINER	
FISH & RICHARDSON P.C. 45 ROCKEFELLER PLAZA, SUITE 2800 NEW YORK, NY 10111			LEE, JOHN D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,969	AOKI ET AL.	
	Examiner	Art Unit	
	John D. Lee	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

(Abstract)

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1101</u> | 6) <input type="checkbox"/> Other: _____ |

Receipt is acknowledged of papers submitted under 35 U.S.C. §§ 119(a)-(d), which papers have been placed of record in the file.

The two (2) sheets of drawings filed on November 29, 2001, are objected to because of the following reasons. The lines are non-uniform, legends are handwritten, some Japanese writing has been crossed through, and the left-hand margins are not sufficient. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The abstract of the disclosure is objected to because of the identification numerals appearing therein, which make it difficult to quickly read and understand. Correction is required. See MPEP § 608.01(b).

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the remainder of the specification.

Claims 1 and 2 are objected to because of the following minor informalities: in the fourth-from-last line of claim 1, "source" should be "sources"; in line 16 of claim 2, "source" should be "sources"; and in the eighth-from-last line of claim 2, "is" should be "are". Appropriate correction is required.

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. When read in the context of the previous language of the claim, the phrase in the last two lines of claim 1 ("the optical bandpass filter is disposed at a previous stage of the optical time domain reflectometer") does not make any sense. The claim is thus indefinite.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,956,131 to Mamyshev et al in view of U.S. Patent 5,657,148 to Feuer et al. Mamyshev et al discloses the same OTDR-based optical fiber chromatic dispersion distribution measuring apparatus and method as set forth in applicant's claims, with one exception. Mamyshev et al fails to disclose the use of a coherence controller for controlling coherence of at least one of the outputted light beams of the two different wavelength light sources **12** and **14**. Feuer et al, however, teaches that there is a direct relationship between the intensity and amount of Rayleigh backscattering (i.e. four-wave-mixing backscattering) in a modulator-based optical network and the coherence control of the upstream and downstream signals therein. See column 6, lines 48-54, of Feuer et al. Feuer et al further teaches that it is thus very important to control the

coherence of these propagating signals. Since the Mamyshev et al measuring apparatus is a modulator-based optical interferometric system, the person of ordinary skill in the art would clearly have applied the teachings of Feuer et al thereto, and would have found it obvious to institute a coherence controller in the apparatus to control coherence of at least one of the outputted light beams of the two different wavelength light sources **12** and **14**, thus obtaining a high degree of precision over the Rayleigh (four-wave-mixed) backscattered light. The result would be the same basic optical fiber chromatic dispersion distribution measuring apparatus and method as set forth in applicant's claims. Since, in Mamyshev et al, the optical bandpass filter **32** is tunable and is designed to extract a specific wavelength component of the Rayleigh (four-wave-mixed) backscattered light, applicant's claim 6 limitation (center wavelength coincidence) would certainly have been obvious in the reference. The ratio of the intensity of the outputted light beams of the two different wavelength light sources **12** and **14** of Mamyshev et al would have been chosen to optimize the measurement efficiency, and thus a specific ratio (such as 2:1) would have been obvious to the person of ordinary skill.

The prior art document submitted by applicant in the Information Disclosure Statement filed on November 29, 2001, has been considered and made of record (note the attached initialed copy of form PTO-1449). It is noted that this prior art document corresponds to U.S. Patent 5,956,131 to Mamyshev et al, relied on the rejection above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited U.S. Patent to Ryu et al shows another method and apparatus for measuring chromatic dispersion characteristics in an optical fiber. The cited U.S. Patent to Hobbs et al provides another teaching of the relationship between control of the coherence of light beams in an interferometric measuring device and the sensitivity of the resultant measurement. The remaining cited references (all identified by the inventorship "Aoki et al") are not available as prior art against the claims of the present application, but appear to be disclosures by applicant of optical fiber chromatic dispersion distribution measuring apparatus and methods that are very similar to that being claimed herein.

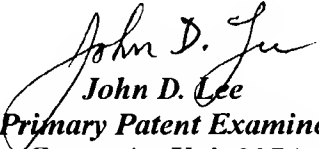
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. §§ 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (703) 308-4886. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to

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the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874